Amendments to the Claims:

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of claims:

Claim 1 (currently amended): A vertically structured power semiconductor component, comprising:

a semiconductor body of a first conductivity type and having a first main surface and a second main surface opposite said first main surface;

a body zone of a second conductivity type opposite of said first conductivity type introduced into said first main surface;

a zone of said first conductivity type disposed in said body zone;

a first electrode making contact with said zone and with said body zone;

a second electrode disposed on said second main surface;

an insulating layer disposed on said first main surface;

a gate electrode disposed above said body zone and separated from said body zone by said insulating layer; ~~and~~

an intersection of said semiconductor body and said body zone defining a pn junction; and

a compensation region of said second conductivity type disposed below said body zone in said semiconductor body;

said semiconductor body having:

a layer thickness between said pn junction and said second main surface selected such that, when one of a maximum allowed blocking voltage and a voltage just less than this is applied between said first electrode and said second electrode, a space charge zone created in said semiconductor body meets said second main surface before a field strength E created by an applied blocking voltage reaches a critical value E_c at which an electrical breakdown is reached; ~~and~~

~~a specific sheet charge density $\rho_F(z)$ of a thin layer having a surface perpendicular to a direction z between said pn junction and said second main surface such that:~~

~~$\int_0^W \rho_F(z)dz \leq 0.9Q_c$, $\rho_F = \int \rho dF$~~

~~in which ρ is the volume charge density, Q_e, the critical breakdown charge, denotes a critical value of the charge quantity Q at which the electrical breakdown is reached, said charge quantity Q being linked to said electric field strength E between said first electrode and said second electrode by the equations~~

~~$\int_0^W \rho_F(z)dz = Q$ and Poisson's equation $\nabla E = 4\pi\rho$~~

heavily doped terminal regions of said first conductivity type disposed at said second main surface;

a further zone of said first conductivity type disposed in a vicinity of said second main surface; and

punch-through regions disposed between said heavily doped terminal regions, a current/voltage characteristic in breakdown being controlled through an area ratio between said heavily doped terminal regions and said punch-through regions.

Claims 2-5 (cancelled).

Claim 6 (original): The vertically structured power semiconductor component according to claim 1, wherein said semiconductor body has an edge termination and including a channel stopper disposed in an area of said edge termination.

Claim 7 (original): The vertically structured power semiconductor component according to claim 6, including a source magnetoresistor disposed above said first main surface.

Claim 8 (cancelled).

Claim 9 (currently amended): The vertically structured power semiconductor component according to claim ~~8~~ 1, wherein said compensation region of said second conductivity type is produced by a plurality of epitaxy and implantation operations.

Claim 10 (original): The vertically structured power semiconductor component according to claim 9, wherein said compensation region of said second conductivity type is produced horizontally between said first main surface and said second main surface through same implantation openings.

Claims 11-12 (cancelled).